

~~LEVI, V.A.~~

Recent data on the tectonics of the northern subsidence of the  
Kyurovdag anticline. Azerb. neft. khoz. 39 no.2:5-8 P '60.  
(MIRA 14:8)

(Kyurovdag—Geology, Structural)  
(Seismic prospecting)

LEVI, V.A.

Seismic logging on a single cable. Razved.i prom.geofiz. no.44:  
48-54 '62. (MIRA 15:7)  
(Seismic prospecting)

LEVI, V.A.; TREBUKOVA, B.D.

Seismic studies in the northwestern part of the Shirvan Steppe  
of Azerbaijan. Geol. nefti i gaza 7 no.3:56-61 Mr '63.  
(MIRA 16:4)

1. Kontora morskoy geofizicheskoy razvedki.  
(Kura Lowland—Petroleum geology)  
(Kura Lowland—Gas, Natural—Geology)

LEVI, V.A.; RIGER, R.R.

Using the reflection sounding method for studying the subsurface  
tectonics of southwestern Kobystan. Azerb.neft.khoz. 41 no.4:  
4-7 Ap '62, Azerb.neft.khoz. 41 no.4:4-7 Ap '62. (MIRA 16:2)  
(Kobystan--Seismic prospecting)

ACC NR: AT6028971

SOURCE CODE: UR/0000/65/000/000/0101/0107

AUTHOR: Levi, V. A.; Musayelyan, A. S.; Polonskiy, E. M.; Khachaturyan, S. S.

ORG: Bureau of Marine Geophysical Prospecting. Azerbaydzhan Scientific-Research Institute of Petroleum Production (Kontora morskoy geofizicheskoy razvedki. Azerbaydzhanskiy nauchno-issledovatel'skiy institut po dobyche nefi)

TITLE: Results of the application of the central-ray method in the southeastern part of the Kur depression

SOURCE: Vsesoyuznyy seminar po novoy metodike seysmorazvedki. Seysmorazvedka s primeneniym gruppirovaniya vzryvov na dlinnykh bazakh i sposoba tsentral'nykh luchey (Seismic prospecting using the grouping of shots on long bases and the method of central rays); trudy seminara. Moscow, Izd-vo Nedra, 1965, 101-107

TOPIC TAGS: seismic prospecting, underground explosion, seismic wave, seismology, marine seismic prospecting

ABSTRACT: The article presents an analysis of data obtained by the central-ray method (STsL) in the Mugansk steppe. It is shown that under favorable surface and subsurface seismogeological conditions,

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ACC NR: AT6028971

STsL provides more detailed and complete cross sections than continuous profiling by the method of reflected waves. Recording time increases to 7—8 sec with up to 16 instruments in the receiving group and explosive weights of 30—35 kg. Quality of data is found to decrease closer to the piedmont regions. STsL is recommended for marine seismic prospecting. Orig. art. has: 4 figures and 1 formula.

SUB CODE: 08/ SUBM DATE: 30Apr65/

ACC NR: AT6034504

SOURCE CODE: UR/0000/66/000/000/0043/0056

AUTHOR: Davydova, N. I.; Krasnopevtseva, G. V.; Manilov, S. A.; Levi, Y. A.; Lobastova, L. A.; Shekinskiy, E. M.; Tvaltvadze, G. K.

ORG: none

TITLE: Results of deep seismic sounding in the Caucasus

SOURCE: AN SSSR. Otdeleniye nauk o Zemle. Nauchnyy sovet po kompleksnym issledovaniyam zemnoy kory i verkhney mantii. Glubinnoye stroeniye Kavkaza (Abyssal structure of the Caucasus). Moscow, Izd-vo Nauka, 1966, 43-56

TOPIC TAGS: Mohorovicic discontinuity, earth crust, deep seismic sounding, granitic layer, basaltic layer, seismic velocity, *SEISMIC PROSPECTING / CAUCASUS*

ABSTRACT: The results are summarized of deep seismic sounding conducted in 1960 to 1962 along a 300-km submeridional profile between Stepnoye and Bakuriani and a 700-km sublatitudinal profile extending along the axial part of the Transcaucasian intermountain region between the Black and Caspian Seas. Continuous, piece wise continuous and point profiling methods were used. The analysis of data shows that the Earth's crust, 32-km thick in the region of El'iehotovo, increases to 38-40 km in the area of Stepnoy-Nizhniy Kurp and to 42-46 km in the southern part of the profile. The boundary velocity along the Mohorovicic discontinuity determined in the area of Nabakhtevi is 8.4 km/sec. The depth to the top of the consolidated crust with a boundary velocity of 6 km/sec varies from 7 km in the Zaterachnaya

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ACC NR: AT6034504

Plain to 300—400 m at Rokskiy Pass. Although the interfaces within the crust were not determined, seismic data appears to indicate a layered structure. The thickness of the Earth's crust along the sublatitudinal profile varies from 40—41 km at the western end of the profile and near the city of Kirovabad to 47—49 km under the Dzirul'skiy massif and east of Lake Dzhandar. The boundary velocity is 8 km/sec. The boundary velocity along the top of the consolidated crust is 5.8—6.2 km/sec. The depth to the top of the consolidated crust varies from 0 (Dzirul'skiy massif) to 12—15 km in the area of Barda-Agdzhabedi. Two interfaces with boundary velocities of 6.7—7 and 7.2—7.5 km/sec were established within the crust at a depth of 10—20 and 30 km, respectively. Sharp variations were established in the ratio of the thickness of granitic to basaltic layers along the sublatitudinal profile. A downwarping of the Mohorovicic discontinuity under the mountains along both profiles is noted. The results obtained are in qualitative agreement with earlier geophysical investigations. However, deep seismic-sounding data indicate a downwarping of the Mohorovicic discontinuity under the Dzirul'skiy massif, while gravity data indicate upwarping. The article contains 7 figures including a map showing the locations of the profiles, a rough seismic cross section along the submeridional profile, a seismic cross section along the sublatitudinal profile and three other seismic-geologic cross sections of the same general area compiled from seismic and gravity data by other investigators. Orig. art. has: 7 figures. [WA-794]

SUB CODE: 08/ SUBM DATE: 26Feb66/ ORIG REF: 013/

Card 2/2



LEVI, V.B.

Novocaine block and its modification in outpatients treatment.  
Sov.med. 22 no.6:61-64 Je '58 (MIRA 11:9)

1. Is platnoy polikliniki No.5 Lengorsdravotdela i polikliniki No.32  
Zhdanovskogo rayona Leningrada.  
(NEURALGIA, ther.  
procaine nerve block (Rus))

LEVI, Vladimir Emil'yevich

[Leningrad health resorts] Leningradskie kurorty. Leningrad,  
Medgis, 1959. 118 p. (MIRA 13:8)  
(LENINGRAD—HEALTH RESORTS, WATERING PLACES, ETC.)

17(12)

SOV/25-59-6-42/49

AUTHOR: Levi, V.E. (Leningrad)

TITLE: Vitamins of the Air

PERIODICAL: Nauka i zhizn', 1959, Nr 6, pp 77-78 (USSR)

ABSTRACT: The author answers a question asked by M. Volokhin, Khar'kovskaya Oblast'. The question reads: Why do negative oxygen ions favorably influence the human organism? Professor L.L. Vasil'yev and A.A. Chizhevskiy conducted specialized studies concerning this problem. Negative oxygen ions are also called "vitamins of the air". Academician A.A. Mikulin has constructed a portable room apparatus producing negative oxygen ions. The essential parts of the new apparatus are a water container and a small dynamo. The patient has to breathe ionic vapors twice a day for 10 to 20 minutes, to be cured of hypertonic diseases, bronchial asthma, whooping cough, catarrhs of upper respiratory passages, etc. Mass production of the apparatus is being prepared. Other engineers have also constructed similar apparatus, but they work on other principles. The author himself, together with engineer Ye.A.

Card 1/2

SOV/25-59-6-42/49

Vitamins of the Air

Potero, developed the "PL1" hydroionizer whose range is markedly greater than the range of Mikulin's device.

Card 2/2

LEVI, V.H., vrach (Leningrad)

Nervousness in children and its prevention. Med.sestra 18  
no.9:21-24 8 '59. (MIRA 12:11)  
(NERVOUS SYSTEM--DISEASES)  
(CHILDREN--CARE AND HYGIENE)

LEVI, V.E. (Leningrad)

Epilepsy. Med. sestra 19 no.7:17-20 J1 '60.  
(EPILEPSY)

(MIRA 13:8)

LEVI, V.E.

"First aid in acute diseases of the nervous system" by N.S. Misiuk.  
Reviewed by V.E. Levi. Sov. med. 24 no. 5:154 My '60.

(MIRA 13:10)

(NERVOUS SYSTEM—DISEASES)

LEVI, V.M. (Leningrad)

First aid for unconscious patients. Fel'd. i akush. 25:23-29  
My '60. (MIRA 13:7)  
(FIRST AID IN ILLNESS AND INJURY) (COMA)



LEVI, V.E. (Leningrad)

Vertigo. Fel'd. 1 akush. 25 no. 7:26-30 Je '60. (MIRA 13:8)  
(VERTIGO)

LEVI, V.E. (Leningrad)

Psychotherapy in the work of semiprofessional medical personnel.  
Fel'd. i akush. 25 no.11:32-36 N '60. (MIRA 13:11)  
(PSYCHOTHERAPY)

LEVI, V.E. (Leningrad)

"First aid in mental diseases" by G.IA.Avrutskii. Reviewed by  
V.E.Levi. 'Fel'd. i akush. 26 no.3:60 Mr '61. (MIRA 14:3)  
(MENTAL ILLNESS) (FIRST AID IN ILLNESS AND INJURY)  
(AVRUTSKII, G.IA.)

LEVI, V.E. (Leningrad)

Aeroliontherapy. Med. sestra no.5:31-34 My '61.  
(AIR, IONIZED—THERAPEUTIC)

(MIRA 14:6)

LEVI, V.E., vrach (Leningrad)

Cerebral arteriosclerosis. Med. sestra 20 no.8:8-13 Ag '61.  
(MIRA 14:10)

(ARTERIOSCLEROSIS)

LEVI, V.E. (Leningrad)

"Diseases of the cardiovascular system in middle and old age" by  
V.F.Zelenin. Reviewed by V.E.Levi. Fel'd.i akush. 26 no.9:63-64  
S '61. (MIRA 14:10)  
(CARDIOVASCULAR SYSTEM—DISEASES) (ZELENIN, V.F.)

LEVI, V.E. (Leningrad)

Problem of pain. Med.sestra 21 no.8:21-24 Ag '62. (MIRA 15:9)  
(PAIN)

LEVI, V.E. (Leningrad)

Lumbar pains. Med.sestra 21 no.9:22-25 S '62. (MIRA 15:9)  
(BACKACHE)



LEVI, V.E. (Leningrad)

Hypotonia. Med.sestra 21 no.11:52-55 N '62.

(MIRA 16:2)

(HYPOTENSION)

LEVI, V.E. (Leningrad)

"Textbook of nervous diseases" by V.V. Mikheev. Reviewed by  
V.E. Levin. Sov.med. 26 no.12:126-127 D '62. (MIRA 16:2)  
(NERVOUS SYSTEM--DISEASES) (MIKHEEV, V.V.)

LEVI, V.E.

"Medicinal preparations. A handbook (short annotations)."  
Sov. med. 25 no.2:156-157 F '62. (MIPA 15:3)  
(DRUGS)

LEVI, V.E. (Leningrad)

Book and health. Med. sestra 22 no.3:50-52 Mr'63.  
(MIRA 16:6)

(READING-REMEDIAL TEACHING)

LEVI, V.E. (Leningrad)

Functional diseases of the internal organs. Med. sestra 22  
no.9:7-12 8'63. (MIRA 16:10)  
(VISCERA—DISEASES)

LEVI, V.E. (Leningrad)

Rheumatic diseases of the nervous system (neurorheumatism).  
Med. sestra 22 no.11:39-41 N°63 (MIRA 16:12)

BANSHCHIKOV, V.M., prof.; ~~LEVI, V.L.~~

Treatment of atherosclerotic psychoses. Trudy Gos.nauch-issl.  
inst.psikh. 25:368-385 '61. (MIRA 15:12)

1. I Moskovskiy ordena Lenina meditsinskiy institut imeni  
I.M.Sechenova i kafedra psikiatrii (sav. kafedroy - prof.  
V.M.Banshchikov) Gosudarstvennogo nauchno-issledovatel'skogo  
instituta psikiatrii Ministerstva zdavookhraneniya RSFSR.  
(PSYCHOSES) (CEREBRAL ARTERIOSCLEROSIS)

BANSHCHIKOV, V.M., prof.; LEVI, V.L.

Pathogenetic therapy for atherosclerotic psychoses. Trudy 1-go MMI  
25:147-157 '63. (MIRA 17:12)

1. Kafedra psikhiiatrii 1-go Moskovskogo ordena Lenina meditsinskogo  
instituta imeni I.M.Sechenova (zav. kafedroy prof. V.M.Banshchikov).



FEYGENBERG, I.M.; LEVI, V.L.

Experimental investigation of probabilistic prognostication in  
pathological states. Vop. psikh. 11 no.1:42-54 Ja-F '65.

(MIRA 18:4)

1. Nauchno-issledovatel'skaya laboratoriya pri kafedre psikhologii  
TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.

LEVI, V. YA., (Major of the Medical Service)

"Differential Diagnostic Significance of 'Lumbar' and 'Respiratory-Palpatory' Symptoms in Appendicitis"

Voyenno-Meditsinskiv Zhurnal, No. 12, December 1961, pp 62-73

LEVI, V. Ya., mayor meditsinskoy sluzhby

Differential diagnostic significance of "lumbar" and "respiratory-palpitory" symptoms in appendicitis. Voen.-med. zhur. no.12:66-67  
D '61. (MIRA 15:7)

(APPENDICITIS)

LEVI, YA.

Fulfilling the Production Plan on Textile Enterprises. Leka Promishlenost  
(Light Industry), #7-12:7:July-Dec 1955

LEVI, Ya.L., professor; SEMENOVA, G.I.; TSARIKOVSKAYA, N.G., kandidat  
meditsinskikh nauk (Khar'kov)

Surgical treatment of pronounced forms of thyrotoxicosis. Probl.  
endokr. i gorm. 1 no.5:85-91 S-O '55. (MLRA 8:10)

1. Iz klinicheskogo otdela (rukovoditel'--prof. M.A.Kopelovich)  
Ukrainskogo instituta eksperimental'noy endokrinologii (dir.--  
kandidat meditsinskikh nauk S.V.Maksimov)  
(HYPERTHYROIDISM, surgery)

LEVI, Ya.L., professor; SHIPMAN, L.M. (Khar'kov)

Spontaneous glycemia and its therapy. Khirurgiia no.3:69 Nr '55.  
(PANCREAS, neoplasms, adenoma causing hyperglycemia, surg.) (MIRA 8:7)  
(HYPERGLYCEMIA, etiology and pathogenesis,  
pancreatic adenoma, surg.)

Levi Ye N

881. The influence of the method of production and particle size of ~~alkali~~ on its  
underlying in the presence of ~~alkali~~ on its

~ 1.4E20

LEVI, Ye. S.

Chucks

Repairing a three-jawed chuck. Podshipnik No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

LEVI, Yu. V., inzh.; TSVETKOV, A.A., inzh.

Frequency-phase stabilizer of the rotation speed for low-power  
d.c. motors. Priborostroenie no.6:12-13 Je '61.

(MIRA 14:6)

{Electric motors, Direct current)  
(Electric controllers)



LEVY, Zh.P. [Levy, I.P.]; MLINZON, M.P., kand. tekhn. nauk, red. [translator];  
YAKUB, I.A., kand. tekhn. nauk, red. [translator]; GUZMAN, M.A.,  
red.; GILMSON, P.G., tekhn. red.

[Light-weight concrete; manufacture, properties, uses] [Translated  
from the French] Legkie betony; prigotovlenie - svoistva - primeneniye.  
Red. M.P. Mlinzona i I.A. Iakub. Moskva, Gos. izd-vo lit-ry po  
stroit., arkhitekt. i stroit. materialam, 1958, 145 p. (MIRA 11:7)  
(Lightweight concrete)

LEVI-GORINEVSKAYA, Ye.O.

[Development of basic movements in pre-school children] Razvitie  
osnovnykh dvizhenii u detey doshkol'nogo vozrasta. Moskva, Izd-vo  
Akademii pedagog. nauk RSFSR, 1955. 166 p. (MIRA 9:5)  
(MAN--ATTITUDE AND MOVEMENT)

LEVI-JOVOVIC, Eva, dr.

Observations on the special problem of quarantine diseases. Glas. hig.  
inst. 9 no.3/4:113-119 JI-D '60.

(QUARANTINE)

ZDRAVKOVIC, A.; LEVI-JOVOVIC, E.; MIKIC-JOKOVIC, M.

Pathways of transmission of acute intestinal infections. Higijena  
12 no.1:1-14 '60.  
(COMMUNICABLE DISEASES transm)

LEVI-JOVOVIC, E.

Certain problems of diseases subject to quarantine (with special reference to the laboratory diagnosis and epidemiology of these diseases. Higijena 13 no.1:51-56 '61.

1. S posebnim osurtom na laboratorijsku dijagnostiku  
i epidemiologiju ovih oboljenja.  
(QUARANTINE)

DAVANKOV, A.B.; LAUYER, V.M.; RAKITIN, S.V.; LEVIAN, L.G.; CHERNOBAY,  
A.I.

Recovery of noble metals by anion-exchange resins from waste  
and industrial solutions of electrolytic copper plants. Izv.  
vys.ucheb.zav.; tsvet.met. 2 no.6:134-141 '59.

(MIRA 13:4)

1. Moskovskiy khimiko-tekhnologicheskii institut. Kafedra  
tekhnologii plastmass.

(Copper industry--By-products) (Ion exchange)

(Precious metals--Metallurgy)

1. LEVIAN, M. YA.
2. SSSR (600)
4. Umbilicus
7. Secreting ability of unstriated-muscle cells of umbilical vessels in man.  
Dokl. AN SSSR 86 No. 4, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

TITAN, V.S.

Photocolorimetric copper determination

Using a 10% sodium hydroxide solution

(NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> and (NH<sub>4</sub>)<sub>2</sub>CO<sub>3</sub>. The relative error for Cu vary between 2.2 and 4.7%. Time required for analysis is 2-3 hrs.

W. H. Stegberg



18(6)

PLANE 1 BOOK EXPLOITATION 30V/3199

Академия наук СССР. Институт обобщенной неорганической химии  
И. М. С. Курчатов

Анализ благородных металлов (анализы благородных металлов) Москва,  
1959. 193 с. Брета альп inserted. 2,700 copies printed.

Бесп. М.: И. Е. Пашинян. USSR Academy of Sciences, Corre-  
sponding Member and O. Ye. Izrael'skiy, Doctor of Chemical  
Sciences; M. G. Publishing House: T. O. Levi, and D. M.  
Trifonov; Tech. Ed.: I. M. Guseva.

Резюме: This collection of articles is for scientists engaged  
in the study and analysis of the noble metals.

Содержание: This is a collection of articles on the analysis of the  
noble metals. It includes studies carried out by the Institute  
of General and Inorganic Chemistry, M. S. Kuratov (AN USSR),  
as well as reports presented by scientific research organizations  
and by industrial enterprises at the Third and Fourth Conference  
on Noble Metals held in 1954 and 1957, respectively. The  
studies and reports describe new organic reagents for gravi-  
metric determination of platinum metals, and physicochemical  
methods of analysis (spectrophotometric, polarographic and  
potentiometric). Special attention is given to spectral  
analysis for the determination of admixtures in alloys of  
platinum with silver and gold, as well as in refined noble  
metals. The collection also includes analytical methods, tables  
and charts for materials containing metals of the platinum  
group, as well as a review of the literature on the analysis  
of platinum metals published in the last five years. The  
personnel are mentioned. References follow each chapter.

Аннотация: Б. О. и Т. П. Туга. Фотохимические методы  
использования в анализе благородных металлов

Аннотация: Б. О. и Т. П. Туга. Фотохимические методы  
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Аннотация: Б. О. и Т. П. Туга. Фотохимические методы  
использования в анализе благородных металлов

LEVIANT, F.M.

Legislative enactments of the Supreme Soviet of the U.S.S.R.  
and its Presidium which regulate the labor relations of  
workers and employees. Uch.zap.LGU no.274:20-40 '59.  
(MIRA 13:5)

(Labor laws and legislation)

I. LEVIANT

"Vacuum concrete. p. 22" (GRANDVINAR, Vol 5, No. 1, Jan. 1953, Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions, L.C., Vol. 2, No. 11, Nov. 1953, Uncl.

LE PLANT, K. L.

3138 AEC-tr-2391

DETERMINATION OF THE EFFECTIVE CROSS SECTION  
FOR ELECTRON LOSS BY ATOMIC NITROGEN IONS IN  
THE ENERGY RANGE OF 400 TO 1100 KEV. M. J.

Korzunskii, L. I., Rytov, A. M., Merkus, and Kh. L.

Leningrad. Translated from Doklady Akad. Nauk S.S.S.R.

163, 566-567 (1966). Available from Associated

Technical Services, (Triga. 23168), East Orange, N. J.

A study was made of the processes of electron loss by

N during the passage of singly charged  $N^{+}$  ions through  
a gaseous target in the energy interval 400 to 1100 kev.  
Values of the effective cross sections obtained for electron  
loss were found to be linear with pressure change until an  
equilibrium was reached at high pressures. A marked  
energy dependence was found. (D.E.B.)

③ Raw emc

700-1-200

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CIA-RDP86-00513R000929510015-9

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000929510015-9"

LEVIAN, Kh. L.

Category : USSR/Nuclear Physics - Origin of Charged and neutral particles through matter C-6

Abs Jour : Ref Zhur - Fizika, No 1, 1957, No 585

Author : Korsunskiy, M.I., Leviant, Kh.L., Pivovarov, L.I.,

Inst : Khar'kov Polytechnic Inst., USSR

Title : Applicability of the Ratio  $(\sigma_{12}\sigma_{31}\sigma_{23}/\sigma_{21}\sigma_{13}\sigma_{32}) = 1$ , which Holds for Detailed Equilibrium, to a Beam of Ions with a Stationary Composition

Orig Pub : Dokl. AN SSSR, 1956, 107, No 5, 664-667

Abstract : An analysis of the experimental data, obtained by various investigators, is used to show that the following equality holds with an accuracy to within 5%:

$$\frac{d}{dn} \left( \frac{1}{N_i} \frac{dN_i}{dn} \right) = - \frac{N_i^2}{N_i^2} + \sigma_{12} \frac{N_i^2}{N_i^2} + \sigma_{13} \frac{N_i^2}{N_i^2} + \dots (1)$$

where  $N_1, N_2, \dots$  etc is the number of ions in the beam having charges 1, 2, etc., and  $N_1^*, N_2^*, \dots$  etc. is the number of ions in the stationary case. Equation (1) is obtained if the relationship

(2)

$$\frac{\sigma_{12} \sigma_{23} \sigma_{31}}{\sigma_{21} \sigma_{13} \sigma_{32}} = 1$$

is valid and is obtained for cross sections that characterize the charge exchange between a beam of fast ions and a substance at room temperature;

Card : 1/2

LEVIAN, S.M.  
GROMKOVSKAYA, A.A., kandidat meditsinskikh nauk; LEVIAN, S.M., kandidat  
meditsinskikh nauk; DANSEK, V.N., kandidat biologicheskikh nauk;  
KHITSKOVA, Ye.T.

State of health and organization of medical services to children at a  
rural medical section. Vop.okh.mat. 1 det. 1 no.5:77-80 S-O '56.  
(MLRA 9:11)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo pediatricheskogo  
insituta Ministerstva zdavookhraneniya RSFSR (dir. - prof. A.L.Libov)  
Leningrad.

(MEDICINE, RURAL)

(CHILDREN--CARE AND HYGIENE)

LEVIANT, S. H.

"Physical development and state of health of children of school  
age in Leningrad and methods of its study."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists  
and Infectionists, 1952.



KUTINA, L.S.; LEVIANT, S.M.; kand.med.nauk

Forms of work organization of the Pediatrics Research Institute in  
creative collaboration with practicing public health institutions.  
Vop. okh. mat. i det. 5 no.6:61-66 N-D '60. (MIRA 13,12)

1. Iz Leningradskogo nauchno-issledovatel'skogo pediatricheskogo  
instituta (direktor - zaslushennyy vrach respublik L.S.Kutina).  
(PEDIATRICS--STUDY AND TEACHING)

LEVIANI, S.M. (Leningrad)

"Method of Evolvment of Standards of Physical Development of Children"

Report presented at the 3rd Conference on the use of Mathematics in Biology,  
Leningrad University, 23-28 Jan. 1961.

(Primeneniye matematicheskikh Metodov v Biologii. II, Leningrad, 1963 pp 5-11)

LEVIAIT, S.M., kand.med.nauk

Some problems in medical attendance for children in school.  
Vop. okh. mat. i det. 7 no.2:74-77 F '62. (MIRA 15:3)

1. Iz Leningradskogo gosudarstvennogo nauchno-issledovatel'skogo  
pediatricheskogo instituta (dir. - zaslužennyy vrach RSFSR  
L.S. Kutina).

(SCHOOL HYGIENE)

LEVIAN, S.M.

Methods for working out norms of the physical development  
of children. Prim. mat. metod. v biol. no.2:225-229 '63.  
(MIRA 16:11)

\*

LEVICEK, P.

Information. Slevarenstvi 11 no.8/9:411-412 Ag '63.

SOV/91-59-10-9/29

8(6), 28(1)

AUTHORS:

Ivantsov V.A. and Levich A.A., Engineers and Ukhin B.N.  
Chief of the Chemical Department

TITLE:

Automatic Filling of Expenditure Tanks with Phosphates

PERIODICAL:

Energetik, 1959, Nr. 10, pp 18-20, (USSR)

ABSTRACT:

At the Nizhne-Turinskaya GRES, a phosphate solution is prepared in the department for chemical purifying of water. The solution is prepared in an installation consisting of a dissolving tank, into which chemically pure water and steam are fed, a coke filter, and two tanks for keeping the ready solution. For mixing the solution, pumping it into spare tanks and filling two expenditure tanks in the boiler room, two centrifugal pumps are used. The pipeline length from the spare tanks to the boiler room is about 320 m. Two workmen, one at the expenditure tanks and another at the pump, were required to operate the feed line. The Chief of the TsSTI "Sverdlovennergo", D.P. Larionov, proposed automation of the expenditure tank filling process by using a layout requiring a minimum quantity of cable (Fig. 1). For this purpose, a dif-

Card 1/2

LEVICH, A.A. (Nizhnyaya Tura); UKHIN, B.N. (Nizhnyaya Tura)

Automation of the proportioning of reagents at water supply  
stations. Vod. i san. tekhn. no.10:31-32 0 '61.

(MIRA 14:11)

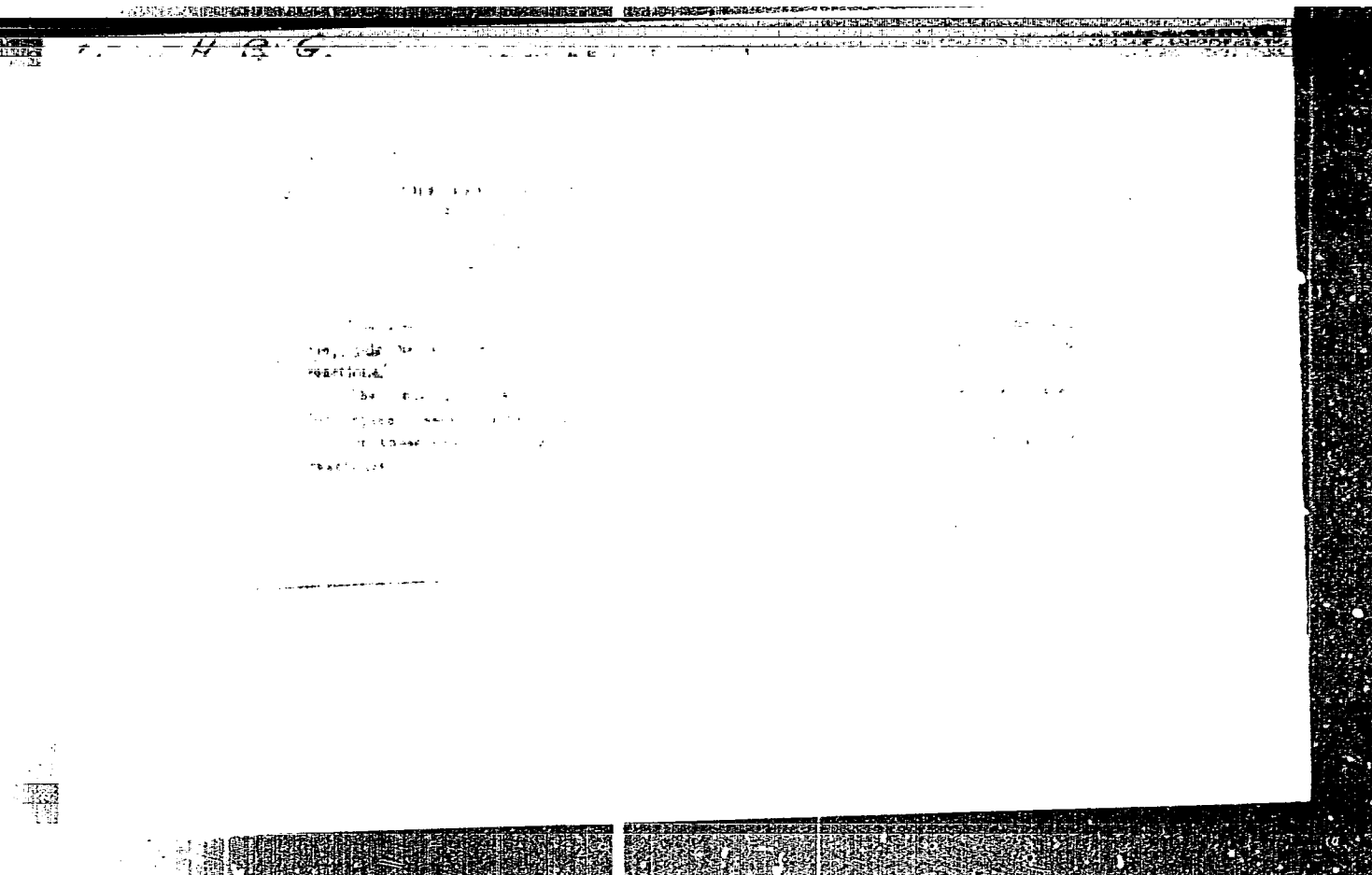
(Water--Purification)

LEVICH, A.M.; KHOROSHKO, A.F.; KANEVSKAYA, Ya.S. (Kiyev)

Hats made from synthetic materials. Shvein.prom. no.2:29 Mr-Ap  
'61. (MIRA 14:4)

(Hats)





LEVICH, G A

USSR/General Problems of Pathology - Tumors.

S-4

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71499

Author : Ishchenko, I.N., Levich, G.A.

Inst :

Title : "ACS" [1] and Repeated Small Blood Transfusions in Complications Due to Tumour X-Ray Therapy.

Orig Pub : Citotoksiny in Sovrem. Medizine, Kiev, 1956, 224-230

Abstract : 225 breast cancer patients were studied (30- first stage, 55- second stage, 35- third stage and 25- fourth stage of cancer). The majority of them were operated on before X-ray therapy, and part of them were treated by X-ray preoperatively. Hematology, cancerolytic coefficient (CC), and skin testing with trypan blue (TB) was done on the patients.  $CC < 1.5$  and  $TB < 15$  were regarded as indications of lowered antitlastic reaction. After X-ray, most of the patients showed a decrease in reactivity. And thus, the lowering of CC and TB was noted in 64 percent,

Card 1/2

- 38 -

Card 2/2

- 39 -

LEVICH, G. L.

USSR/Miscellaneous - Calibration

Card : 1/1

Authors : Levich, G. L.

Title : Drawing calibration lines on round caliper-scales.

Periodical : Stan. i Instr., Ed. 7, 31 - 33, July 1954

Abstract : Methods and instruments adopted by the "Kalibr" factory, for drawing calibration lines on round caliper scales, are described. Methods of calibration by means of E. S. Zhdanov's engraving machine, and a hydraulic marking machine, designed by the above factory, are presented. Drawings.

Institution : ....

Submitted : ....

LEVICHEV, I.A., mekhanik teplokhoda; ODINTSOV, D.I., lineynyy mekhanik

Operation of 6C275L engines. Proisv.-tekh. sbor. no.3:19-43 '59.  
(MIRA 13:10)

1. Moskovskoye rechnoye parokhodstvo.  
(Marine diesel engines)





LEVICH, I. A.

AUTHOR: Levich, I. A.

68-1-13/22

TITLE: Causes of an Increased Consumption of Soda for the Purification of Gas from Hydrogen Sulphide by the Arsenical Soda Method (Prichiny uvelichennogo raskhoda sody pri ochistke gaza ot serovoda mysh'yakovo-sodovym metodom)

PERIODICAL: Koks i Khimiya, 1958, No.1, pp. 49 - 51 (USSR).

ABSTRACT: Causes of seasonal (autumn and winter) deterioration of the operation of the gas purification process, accompanied by an increase in the consumption of soda were investigated. It was established that one of the main factors influencing the consumption of soda during the purification of coke oven gas from hydrogen sulphide by the arsenical-soda method is the content of hydrogen cyanide in the gas. An increase in the consumption of soda during the autumn-winter period is due to a decrease in washing out of hydrogen cyanide from the gas by cooling water in the final coolers, as with low temperatures the amount of water used for cooling sharply decreases. By maintenance of the same spraying conditions in coolers ( in summer and winter) about 0.6 - 0.7 g/m<sup>3</sup> of cyanide can be washed out of the gas and the content of cyanide in the gas supplied to the sulphur scrubbers can be maintained at a level of 0.6 - 0.7 g/m<sup>3</sup>. In order to decrease further the content of cyanide in the gas,

Card1/2

68-1-13/22

Causes of an Increased Consumption of Soda for the Purification of Gas from Hydrogen Sulphide by the Arsenical Soda Method.

its washing in a special apparatus of the type of spray coolers, erected in the sulphur recovery plant after the benzole scrubbers is proposed. This washing should be carried out with water circulating in a closed cycle with the removal of cyanide from the wash water by blowing out in a cooling tower. According to

laboratory experiments about  $0.4 - 0.5 \text{ g/m}^3$  of cyanide can be removed in this way, so that the gas supplied to the sulphur scrubbers will contain  $0.2 - 0.3 \text{ g/m}^3$  of hydrogen cyanide. In addition to a decrease in the consumption of soda, such washing of gas will secure a better stabilisation of parameters, determining technological conditions of operation of the sulphur removal plant. There are 3 tables.

ASSOCIATION: Zaporozh'ye Coke Oven Works (Zaporozhskiy koksokhimi-cheskiy zavod)

AVAILABLE: Library of Congress  
Card 2/2



AUTHORS: Levich, I.A. and Kydel'man, A.Ye.

68-58-5-9/25

TITLE: An Improvement in the Method of Preparing Freshly Dissolved Arsenic Before its Feeding into the Operating Solution  
(Usovershenstvovaniye sposoba podgotovki svezherastvorenogo mysh'yaka pered podachey yego v rabochiy rastvor)

PERIODICAL: Koks i Khimiya, 1958, Nr 5, pp 31 - 35 (USSR).

ABSTRACT: In 1956, the stability of the arsenical complex in the solution purifying coke oven gas from hydrogen sulphide was unstable; it was decomposing with the precipitation of arsenic sulphide. A supply of freshly dissolved arsenic to the plant had no substantial influence on increasing its concentration in the purifying solution. An increase of pH to 8 - 8.2 of the freshly prepared arsenical solution had no beneficial influence on the stability of the complex. The negative results were also obtained on transferring sodium arsenite into tri-compound of trivalent arsenic by preliminary saturation of the fresh solution with hydrogen sulphide (from coke oven gas). In the fresh solution, this trisalt is stable but on contact with the operating reagent it is easily transformed into orthoarsenical salt which is easily decomposed. It was found that in order to increase the stability of arsenic in the operating solution the fresh solution should be preliminarily transformed into pentavalent

Card1/2

68-58-5-9/25

An Improvement in the Method of Preparing Freshly Dissolved Arsenic  
Before its Feeding into the Operating Solution

arsenic. This can easily be obtained by saturating the salt with hydrogen sulphide and subsequent oxidation with air. If these operations are performed outside the working cycle, stable compounds are formed which do not decompose on entering the operating solution. It is pointed out that the preparation of the arsenical solution should be carried out on a special installation.

ASSOCIATION: Zaporozhskiy koksokhimicheskiy zavod (Zaporozhiye  
Coke Oven Works)

Card 2/2

LEVICH, I.A.

Disposal of waste waters from the arsenic-soda sulfur-removal  
plant and the resulting production of mixed salts. Koks 1 khim.  
no.11:46-48 '60. (MIRA 13:11)

1. Zaporozhskiy koksokhimicheskiy zavod.  
(Sewage disposal)

GOLYAND, S.M.; STRAKHOVA, A.Ye.; KULESHOV, P.Ya.; LEVICH, I.A.;  
EYDEL'MAN, A.Ye.

Production of sodium thiocyanate from the waste waters of arsenic-  
soda sulfur removal. Koks'i khim. no.5:45-48 '63. (MIRA 16:5)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut po promyshlennoy  
i sanitarnoy ochistke gazov (for Golyand, Strakhova). 2. Zaporozhskiy  
koksokhimicheskiy zavod (for Kuleshov, Levich, Eydel'man).  
(Sodium thiocyanate) (Coke industry—By-products)

MA

7

Damping of waves by surface-active substances. I. H. V. Levinskii (*Acta Physicochim. U.R.S.S.*, 1941, 14, 307—330, 331—332).—I. Mathematical. It is shown that the presence of a surface film, independently of its nature, will always have a damping effect on surface waves.  
II. Mathematical. A liquid which is strongly adsorbed at the surface will have a damping effect analogous to that of a surface film.  
F. J. G.

\*Ohmic Resistance of Local Elements During the Solution of Metals in Acids. V. G. Levich and A. N. Frumkin (*Zhur. Fizich. Khimii (J. Phys. Chem.)*, 1941, 15, 712—720; *C. Abv.*, 1942, 36, 5411).—[In Russian.] Theoretical—mathematical. For a local element due to a disc-shaped inclusion of radius  $r$ , assuming a non-polarizing anode, the specific resistance per unit of central cathode surface is given by  $2/\pi\kappa$ , where  $\kappa$  = specific conductivity of the electrolyte. In the case of zinc dissolving in  $H_2SO_4$ , the ohmic fall of potential should not exceed 13 mv. The change in concentration of the electrolyte at the cathode surface is an equally important factor.

1943

LEVICH, V. G.

Dropping of a liquid by a moving plate. L. Landau and B. Levich, *Acta Physicochim. U.R.S.S.*, 1942, 17, 42-54). Expressions derived for the thickness ( $h$ ) of the liquid layer carried along by a plate moving through the liquid take the forms: (1)  $h = A(\eta/\rho)^{1/2} \gamma^{1/2} (\rho g)^{1/2}$  for small value of  $v$ , the velocity of the plate, (2)  $h \sim A\eta/\rho$  for large value of  $v$ , and (3)  $h = (\eta/\rho g)^{1/2} f(v/\gamma)$  for intermediate value, the last function, and the numerical const.  $A$ , having to be determined by experiment.  $\eta$ ,  $\gamma$ , and  $\rho$  are the viscosity, surface tension, and density of the liquid. J. H. Ha.

*Inst. Physical Problems, Inst Colloid Chem,  
and Electrochem. AS USSR*

LEVICH, V. G.

**Ohmic Resistance of Local Cells in the Process of the Solution of Metals in Acids.** H. Levich and A. Prumkin (*Acta Physicochim. U.S.S.R.*, 1963, 18, (A), 328-340). [In English.] Theoretical. The local electrolytic cells present when metals dissolve in acids are assumed to consist of small cathodic areas, each having the shape of a disc of radius  $r_0$ , embedded in an infinite anodic formed by the plane metal surface. It is further assumed that the anode is non-polarizable, while the cathode is strongly polarized. The specific current density per unit area of the cathode surface has a maximum value of  $2\gamma_0 \kappa$  at the cathode centre, where  $\gamma$  is the conductivity of the electrolyte. The assumptions underlying the calculation are critically discussed and the limits of applicability examined. The effect of such factors as the changes in electrolyte concentration at the cathode surface is investigated. — (I. V. R.)

*Inst. Colloid & Electrochem, AS USSR*

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

**CA**

2

Theory of concentration polarization. V. G. Levich.  
*J. Phys. Chem.* (U.S.S.R.) 18, 235-55(1947).—Theoretical-math. Various possible methods of stating the problem of concn. polarization are discussed, and a generalized theory of the boundary diffusion layer is developed for both a quiet and a turbulent state about the electrodes. The equations derived are applied to some exp't. data of Eilen, and good agreement is obtained. 13 references.

P. H. R.

Theory of concentration polarization. II. Steady-state regime. B. Levich. *Acta Physicochim., U.R.S.S.* 19, 117-32(1947)(in English).—Theoretical - mathematical. Cf. C.A. 37, 600<sup>19</sup>. The effects of non-streamlined circulation, of spontaneous stirring (convection currents, etc.), and of turbulent flow are discussed. III. The transition regime. *Ibid.*, 152-8.

*Acad Sci USSR; Inst of Colloid & Electrochem.*

ASS. SLA METALLURGICAL LITERATURE CLASSIFICATION

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The movement of solid and liquid metal particles in electrolyte solutions. 1. The movement in electric field. A. N. Frumkin and V. Levich. *J. Phys. Chem. (U.S.S.R.)* 19, 672-680; *Acta Physicochim. U.R.S.S.* 20, 709-724 (1945). The forces acting on an emulsifier, a partially polarizable, and a perfectly polarizable drop in a soln. in an electrostatic field are calculated. The mobility of partially polarizable drops is only a small fraction of that,  $\mu$ , of perfectly polarizable drops. This  $\mu$  depends on the stirring of the soln. caused by the flow of the drop surface between the regions of a high and a low interfacial tension. When this stirring is intense,  $\mu$  is inversely proportional to the charge  $q$  on the drop; where it is small,  $\mu$  is proportional to  $q$  and almost as great as the mobility of a particle carrying the full charge equal to the charge of the double layer surrounding the drop. J. J. Bikerman

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 131. APP. AND INDEXES<br>PROCESSES AND PROPERTIES INDEX                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                     | 109 AND 110 148111                                                                                                                                                                                                                                                                                  |
| <div style="position: relative;"> <div style="position: absolute; top: 10px; left: 10px; font-size: 2em;">ca</div> <div style="position: absolute; top: 10px; right: 10px; font-size: 2em;">2</div> <div style="position: absolute; top: 150px; left: 150px;"> <p>Adsorption equilibrium on heterogeneous surfaces.<br/> M. Temkin and V. Levich (Karpov Inst. of Phys. Chem.,<br/> Moscow). <i>J. Phys. Chem.</i> (U.S.S.R.) 20, 1441-57<br/> (1946) (in Russian).--By assuming that the adsorbed<br/> layer is unimol. and that no forces operate between the<br/> adsorbed mols., it is possible to calc. the relation between<br/> the value of the energy of adsorption and the area for which<br/> this value is valid, if the adsorption isotherm is given.<br/> The adsorption isotherms deduced by Il'in (C.A. 18,<br/> 424) and by Jura and Harkins (C.A. 37, 6618) cannot<br/> be reconciled with the above assumption. I. I. B.</p> </div> </div> |                                                                                                                                                                                                                                                                                                     | Common elements<br>Common variables index                                                                                                                                                                                                                                                           |
| ASD-51A METALLURGICAL LITERATURE CLASSIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                     | 6-277-574-74870                                                                                                                                                                                                                                                                                     |
| FROM SUBJECTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | FROM SUBJECTS                                                                                                                                                                                                                                                                                       | FROM SUBJECTS                                                                                                                                                                                                                                                                                       |
| 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 |

LEVICH V.

Movement of solid and liquid metal particles in an electric field. II. Currents of falling drops. A. Frumkin and

✓ V. Levich (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). *J. Phys. Chem. (U.S.S.R.)* 21, 983-99 (1947) (in Russian); cf. *C.A.* 40, 3325; 42, 2160a. Equations are derived for the sedimentation potential of Hg drops in electrolyte solns. Depending on the charge d. on the drop, the viscosities of Hg and ambient soln., and the elec. cond. of this soln., the drops behave either as a liquid (i.e., there is convection streaming in the surface) or as a solid (no convection in the surface). This deduction is in agreement with the data by Rakh (*C.A.* 29, 2812). Similar rules are valid also for drop formation of Hg at the orifice of a capillary. They agree with Kryukova's observations (*C.A.* 41, 6160a). I. I. B.

EXMT

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[illegible]

USSR/Electrolytes  
Electrometallurgy

Jun 1947

"The Motion of Liquid and Solid Metallic Particles  
in Solutions of Electrolytes: III, General Theory,"  
V. Levich. 13 pp

"Zhur Fiz Khim" Vol XXI, No 6

Discusses: 1, the movement of liquid metallic  
particles in an electric field; 2, incompletely  
polarized particles; 3, cataphoresis with  
corrective electric flow; and 4, fall of liquid  
metallic particles in a field of gravity.

14T107

Movement of solid and liquid metal particles in aqueous electrolytes. IV. Maxima on the current-voltage curves of a dropping electrode. A. Frumkin and V. Levich (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow); *J. Phys. Chem. (U.S.S.R.)* 21, 1335-49 (1947) (in Russian); *cf. C.A. 41, 8119b*.—The theory (cf. *C.A. 42, 2156a*) developed for the movement of an isolated drop in an electric field is extended to include drops connected to an electrode. The rate of motion of the drop depends on the potential gradient, which is determined by the asymmetry of the polarization of the drop, and on the movements along the drop surface which are a function of the charge on the drop. This charge can assume maximum values and thus cause maxima on the current-voltage curves. The potential gradient within the solution near the drop depends on the length of the path of the current and on the supply of the reducible substance to different parts of the dropping cathode. When the solution is stirred by the surface movements of the drop, the difference between this supply at positive and negative polarization causes the difference between the positive and negative polarization maxima. J. J. Bikerman

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LEVICH, V.

USSR/Chemistry - Diffusion  
Chemistry - Reactions, Chemical

May 1948

"Theory of Diffusion of Kinetics of Heterogeneous  
Chemical Processes. I. Reactions Which Fall Into the  
Range of the Solid-Liquid Class," V. Levich, Inst  
Phys Chem, Acad Sci USSR, Moscow, 11 pp

"Zhur Pis Enin" Vol XXII, No 5

Speed of every heterogeneous chemical transformation  
depends (a) on speed with which reagents are brought  
to place of reaction, (b) on speed of chemical re-  
action. Obviously, (b) is of greater interest to  
chemist. Hence, no quantitative theory of (a) has  
been produced. Author proposes to fill this gap.

Differential equations are obtained for diffusion  
along boundary layer, for convective diffusion to-  
wards a rotating disc, for plate immersed in flowing  
liquid, and for plate with natural convection. Spe-  
cial apparatus is required and has been constructed  
for revolving disc case. Theory, as applied to discs,  
shown to be in close accord with experimental re-  
sults. Submitted 5 Jul 1947.

68225

LEVICH, V.

PA 56/49T95

USSR/Physics  
Diffusion  
Flow; turbulent

Jun 48

"Theory of Diffusion Kinetics of Heterogeneous Chemical Processes: II, Reactions Occurring on the Borderline Between the Solid and Liquid Phases During Turbulent Flow," V. Levich, Inst of Phys Chem, Acad Sci USSR, Moscow, 9 pp

"Zhur Fiz Khim" Vol XXII, No 6

Discusses (1) turbulent flow of liquids, (2) diffusion towards a smooth plate, and (3) reaction on surfaces of bodies of nonstreamlined form. Submitted 7 Jan 47.

56/49T95



PA 36/491100

LEVICH, V.

USSR/Physics  
Films, Liquid  
Fluids - Diffusion

Jun 48

"Theory of Diffusion Kinetics of Heterogeneous Chemical Processes: III, Reactions Occurring on the Borderline Between the Liquid and Gaseous Phases,"  
V. Levich, Inst of Phys Chem, Acad Sci USSR, Moscow,  
9 pp

"Zhur Fiz Khim" Vol XXII, No 6

Discusses diffusion towards a moving drop, dissolving of a gas in a flowing film of liquid, and cases of turbulent movement in a film. Submitted 7 Jan 47.

36/491100

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000929510015-9

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000929510015-9"

CA

4

Theory of the nonequilibrium double layer. V. Levich. Doklady Akad. Nauk S.S.S.R. 67, 120-122 (1949). The theory of the structure of the elec. double layer is developed in a current flowing through the electrode. In the absence of specific adsorption, the effect of the current is very small, and the structure of the double layer is not very different from its equil. structure, if the current-conducting ions are of a sign opposite to that of the charge of the electrode. If the current-conducting ions are of the same sign as the charge of the electrode, their distribution in the diffuse part of the double layer is perturbed by the current, whereas the distribution of the nonconducting ions remains Boltzmannian. The max. current able to flow through the double layer decreases exponentially with the potential at the boundary between the Helmholtz and the diffuse parts of the double layer.

LEVICH, V.G.

USSR.

Diffusion kinetics of electrochemical processes. V.G.  
Levich, *Trudy Sovetskoye Elektrokhim., Akad. Nauk*  
S.S.S.R., Otdel. Khim. Nauk 1950, 193-201(1953); cf.  
C.A. 46, 4892A.—The significance of the diffusion theory for  
electrochem. kinetics is discussed. R. D. Misch

104147

LEVICH, V. G.

USSR/Engineering - Hydromechanics

21 Jun 51

"Theory of Diffusion Processes in a Moving Liquid (Hydrodynamics at High Prandtl Numbers)," V. G. Levich

"Dok Ak Nauk SSSR" Vol LXXVIII, No 6, pp 1105-1108

In addn to Levich's previous works, in which he discussed quant theory of processes of convective diffusion in liquids, here he emphasizes inapplicability of analogy between diffusion and thermal cond for the case of liquids. Submitted by Acad A. N. Frumkin 4 May 51.

184145

LEVICH V. G.

Theory of slow heterogeneous reactions in a moving liquid. V. G. Levich and N. N. Mekman. *Doklady Akad. Nauk S.S.S.R.* 79, 97-100 (1951).—The differential equation of collective diffusion,  $u(\partial c/\partial x) + v(\partial c/\partial y) = D(\partial^2 c/\partial y^2)$ , where  $D$  = diffusion coeff.,  $u$  and  $v$ , resp., are the tangential and the normal components of the velocity of flow of the liquid at the boundary layer, and  $c$  = the unknown concn. of the substance in the liquid, is solved under the general boundary condition  $D(\partial c/\partial n) = \beta c$ ; further conditions are,  $c = c_0$  at  $y \rightarrow \infty$ , and  $c = c_0$  at  $x = 0, y \neq 0$ . The velocity components  $u$  and  $v$  are expressed by power series in  $y/\delta$ , where  $\delta$  is the thickness of the boundary layer. In terms of new variables  $\xi = 4/3kx^{3/2}$  and  $s = 2/3y^{3/2}/x^{-1/2}$ , the new function  $\Omega(s, \xi) = c(x, y)/x^{1/2}$  satisfies the equation  $(\partial^2 \Omega/\partial s^2) + (1/s)(\partial \Omega/\partial s) - (1/10s^2)\Omega = \partial \Omega/\partial \xi$ ; its soln. leads to a soln. for  $c(s, \xi)$ , and thence for the flow  $f(x, y)$ . Near the edge of the  $x, y$  plane, the flow

is detd. solely by the rate of the chem. reaction; farther from the edge, the rate of transfer of the substance plays an increasingly prominent role. At variance with Nernst's elementary theory of the diffusion layer, the effective thickness of the boundary diffusion layer varies following different laws in different portions of the  $x, y$  plane. N. Thon

LEVICH, V. G.

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\*Levič, V. G. Fiziko-himičeskaya gidrodinamika. [Physical-chemical hydrodynamics.] Izdat. Akad. Nauk SSSR, Moscow, 1952. 338 pp. 23.60 rubles. 1 - P/W

NS This book treats aspects of hydrodynamics with which, for the most part, a mathematician is not usually concerned, perhaps because they seldom come to his attention. After an introductory chapter outlining the standard hydrodynamic theory, especially viscous flow, boundary-layer theory, and turbulent flow, the following topics are treated: convective diffusion; diffusion in a turbulent flow; passage of current through a solution of electrolytes; capillary motion; motion of drops and bubbles; motion of particles in solutions of electrolytes; theory of the polarograph; waves on the surface of a fluid; motion and diffusion in thin layers of a liquid. Each chapter is followed by a bibliography (surprisingly, the work of Grimeka on the motion of drops [Sobranie sočinenij, pp. 206-230, Akad. Nauk SSSR, Moscow, 1952; MR 15, 89] is not listed). The mathematical methods are elementary and interest for a mathematician will lie chiefly in the subjects treated. J. V. Wehausen.

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LEVICH, V.G.; STAROKADOMSKAYA, Ye.L., redaktor; TUMARKINA, N.A., tekhnicheskii redaktor.

[Introduction to statistical mechanics] Vvedenie v statisticheskuiu fiziku. Izd. 2-e, perer. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1954. 529 p. (MLRA 8:1)  
(Statistical mechanics)



*Levich, V.G.*

USSR/Chemistry - Physical chemistry

Card 1/1 : Pub. 22 - 27/44

Authors : Deryagin, B. V., Memb. Corresp. of Acad. of Sc. USSR, and Levich, V. G.

Title : Theory of repelling forces in electrolyte layers between non-uniformly charged surfaces

Periodical : Dok. AN SSSR 98/6, 985-988, October 21, 1954

Abstract : The development of an ion-electrostatic theory, regarding the repulsion forces in electrolyte layers between uniformly and non-uniformly charged surfaces, is discussed. The formulation of the first quantitative physical-theory, of the stability of lyophobic colloids and dispersion systems, is described. Formulas, determining the repulsion forces in electrolyte layers, are included. Eight references: 6-USSR and 2-USA (1937-1953). Graphs.

Institution : Academy of Sciences USSR, Institute of Physical Chemistry

Submitted : July 7, 1954

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 37/56

Authors : Levich, V. G.

Title : The theory of coagulation of colloids in a turbulent liquid flow

Periodical : Dok. AN SSSR 99/5, 809-812, Dec 11, 1954

Abstract : The effect of turbulent mixing on the rate of colloid coagulation process was investigated. The analyzed coagulation mechanism may play an important role in the case of aerosols since the diffusion coefficient of particles in the air is approximately  $10^4$  times greater than in water. The turbulent diffusion is only than greater than the Braunian when the particles involved have dimensions varying between  $10^{-3}$  -  $10^{-4}$  cm. The effect of increased rate of flow and increased particle dimensions on the coagulation of colloidal particles is explained. Five references: 4-USSR and 1-German (1930-1953).

Institution: .....

Presented by: Academician A. N. Frumkin, July 17, 1954

LEVICH, V. G.

USSR/ Physics - Physical chemistry

Card 1/1 Pub.22 - 41/63

Authors : Levich, V.G.

Title : The theory of coagulation and precipitation of aerosol particles in a turbulent gas flow. Coefficient of capturing aerosol particles

Periodical : Dok. AN SSSR 99/6, 1041-1044, Dec 21, 1954

Abstract : Theoretical data are presented regarding the presence in a gas flow of large particles or drops which are capable of capturing aerosol particles and the precipitation of aerosol particles on solid surfaces. It was found that the mechanism of coagulation in the field of turbulent accelerations is conformable with the theory of gravitational coagulation. There is no precipitation of aerosol particles in a turbulent flow when the rate of their drop into the field of gravitation is small in comparison with the rate of the turbulent pulsations. The only possible exception could be the zone of very small intervals to the horizontal solid surface where the turbulent flow of the liquid is decelerated. Eight USSR references (1946-1954).

Institution: .....

Presented by: Academician A.N. Frumkin, July 17, 1954

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